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| 10/015,371 | 12/12/2001 | Kazuaki Nagamine | FUJH 19.250 | 2893 |
| 26304 | 7590 | 07/11/2006 | EXAMINER | |
| KATTEN MUCHIN ROSENMAN LLP | | | AHMED, SALMAN | |
| 575 MADISON AVENUE | | | ART UNIT | |
| NEW YORK, NY 10022-2585 | | | PAPER NUMBER | |
| | | | 2616 | |

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/015,371

Applicant(s)

NAGAMINE ET AL.

Examiner

Salman Ahmed

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/23/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/12/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 1-10 are pending.

Claims 1-3 and 6-10 are rejected under 103.

Claims 4 and 5 are rejected under 112 second paragraph.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 4, 5 and 9 have the following newly added limitations:

"A control unit transmit switching information in case where trouble has occurred in said transmission lines shared by said plurality of networks transmit switching information in the case of trouble only to said network having said higher transmission speed in digital wrapper system."

The limitation is confusing. It is not clear as to the limitation "transmission lines shared by said plurality of networks" is the same network cited in the limitation "having said higher transmission speed"; i.e. it is not clear if the trouble occurred in the network with higher transmission speed or any network? Further, it is not clear whether "transmit switching information" is transmitting to any network or transmitting to "network having said higher transmission speed"? Lastly, it is not clear whether the "network having said

higher transmission speed" is the network that encountered the trouble and also it is the same network that received "switching information". As such, the above-cited limitations are indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1 (as understood by the Examiner), 2, 3, 6, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lauder et al. (US PAT PUB 2002/0135835),

Art Unit: 2616

in view of Majd et al. (US PAT 6587974), hereinafter referred to as Majd in view of Moy et al. (US PAT PUB 2003/0035411), hereinafter referred to as Moy.

In regards to claims 1, 2 and 3 Lauder teaches a node device (figure 1 element 100) for connecting a plurality of networks (figure 6, elements 600 and 602), node device comprising: a plurality of input units (figure 1, element 126 and element 122) for respectively inputting data from first transmission lines installed in each of plurality of networks; a plurality of output units (figure 1, element 126 and element 122) for respectively outputting data to second transmission lines installed in each of plurality of networks; and a first switching (figure 1, element 108) unit for switching the data input from input units to output units; a control unit (figure 4, Gigabit Ethernet controller 406) transmits information (page 3 section 0038, Packet-Over-SONET) to network having only higher (page 3 section 0038, 412 interface for Packet-Over-SONET) transmission speed (page 3 section 0036, the dual Gigabit Ethernet controller 406 further includes a dual GbE Medium Access Control (MAC) unit for transmitting and receiving GbE packets on the two GbE streams 402, 404. The dual Gigabit Ethernet controller 406 further includes a Packet-Over-SONET Physical layer (POS-PHY) level 3 (PL3) Slave unit 412 for transmitting and receiving packets over the standard PL3 channel 414 (page 3 section 0036); the input unit that inputs data from a transmission line shared by plurality of networks among first transmission lines having a higher transmission speed than other input units (figure 1, where element 126 has a higher bandwidth than element 122).

Lauder does not explicitly teach transmit switching information to the networks related to the fault.

Majd in the same field of endeavor teaches if an error is detected at step 24, for example a break occurs at X 18 (see FIG. 1), a transmitter of node 12 (downstream node) connected to a second cable, cable B (cable 15), sends a fault notification message on the second cable B (15) to a receiver of the upstream originating node 10 (column 2 lines 27-32).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lauder's system/method by incorporating the steps of transmitting switching information to the networks related to the fault as taught by Majd. The motivation is that notifying nodes promptly about the fault enables them to take actions related to APS or Automatic Protection Switching quickly; thus making the network reliable.

In regards to claim 1, Lauder and Majd do not explicitly teach using the digital wrapper system.

Moy teaches (page 8 section 0109) using digital wrapper system.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lauder and Majd's system/method by incorporating the digital wrapper protocol as taught by Moy. The motivation is that (as suggested by Moy, page 8, section 0109) various physical layer technology, for example, SONET, Gigabit Ethernet (GE), or a digital wrapper connection, can be used to encode data efficiently

and reliably on the optical trail. Digital wrapper is one of the efficient networks being used in the optical world for optical communication successfully.

In regards to claims 6, 7 Lauder and Majd teach a multiplexing/Demultiplexing unit (figure 5, element 504) for multiplexing/ Demultiplexing data and sending this data to output units when data is switched and output to output units (figure 1, element 126 element 122) from input units (figure 1, element 122 element 126) that have a transmission speed lower than that of output units (figure 1, element 126 element 122).

In regards to claim 6, Lauder and Majd do not explicitly teach using the digital wrapper method or OHBT method.

In regards to claim 6, Moy teaches (page 8 section 0109) using digital wrapper protocol.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lauder and Majd's system/method by incorporating the digital wrapper protocol as taught by Moy. The motivation is that (as suggested by Moy, page 8, section 0109) various physical layer technology, for example, SONET, Gigabit Ethernet (GE), or a digital wrapper connection, can be used to encode data efficiently and reliably on the optical trail. Digital wrapper is one of the efficient networks being used in the optical world for optical communication successfully.

In regards to claim 8, Lauder teaches first and second transmission lines are formed by optical fibers, and said data is transmitted and received along first and second transmission lines after being or by wavelength division multiplexed by time slots (page 1 section 0008).

4. Claims 9 (as understood by the Examiner) and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Vito et al. (US PAT 6061335), hereinafter referred to as De Vito in view of Majd in view of Moy.

In regards to claim 9, De Vito teaches a network system (figure 1) comprising: a first network (figure 1, stacked OC-48 ring) in which a plurality of first node devices (figure 1, Pop LSO and service nodes in stacked OC-48 rings) are connected by transmission lines; a second network (figure 1, stacked OC-3 ring) in which a plurality of second node devices (figure 1, LSO, CP in stacked OC-3 rings) are connected by transmission lines; and a third node device (figure 1, ring hubs 107, 109) which is connected to some of the transmission lines of first network and some of the transmission lines of second network, third node device transmitting and receiving the data transmitted and received by at least one of transmission lines connected to third node device at a higher speed than the data transmitted and received by the other transmission lines of first network and transmission lines of second network (figure 1, element backbone ring 105 having higher bandwidth than access ring 101, both going through ring hubs 107, 109) wherein the node device further comprising a control unit (figure 4, Gigabit Ethernet controller 406) transmits information (page 3 section 0038, Packet-Over-SONET) to network having only higher (page 3 section 0038, 412 interface for Packet-Over-SONET) transmission speed (page 3 section 0036, the dual Gigabit Ethernet controller 406 further includes a dual GbE Medium Access Control (MAC) unit for transmitting and receiving GbE packets on the two GbE streams 402, 404. The dual

Gigabit Ethernet controller 406 further includes a Packet-Over-SONET Physical layer (POS-PHY) level 3 (PL3) Slave unit 412 for transmitting and receiving packets over the standard PL3 channel 414 (page 3 section 0036); the input unit that inputs data from a transmission line shared by plurality of networks among first transmission lines having a higher transmission speed than other input units (figure 1, where element 126 has a higher bandwidth than element 122).

De Vito does not explicitly teach transmit switching information to the networks related to the fault.

Majd in the same field of endeavor teaches if an error is detected at step 24, for example a break occurs at X 18 (see FIG. 1), a transmitter of node 12 (downstream node) connected to a second cable, cable B (cable 15), sends a fault notification message on the second cable B (15) to a receiver of the upstream originating node 10 (column 2 lines 27-32).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify De Vito's system/method by incorporating the steps of transmitting switching information to the networks related to the fault as taught by Majd. The motivation is that notifying nodes promptly about the fault enables them to take actions related to APS or Automatic Protection Switching quickly; thus making the network reliable.

In regards to claim 9, De Vito and Majd do not explicitly teach using the digital wrapper system.

Moy teaches (page 8 section 0109) using digital wrapper system.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify De Vito and Majd's system/method by incorporating the digital wrapper protocol as taught by Moy. The motivation is that (as suggested by Moy, page 8, section 0109) various physical layer technology, for example, SONET, Gigabit Ethernet (GE), or a digital wrapper connection, can be used to encode data efficiently and reliably on the optical trail. Digital wrapper is one of the efficient networks being used in the optical world for optical communication successfully.

In regards to claim 10 De Vito teaches at least two of third node devices (figure 1, elements 107, 109) are disposed adjacent to each other, and the data that is transmitted and received by transmission lines (figure 1, backbone ring 105) between at least two of third nodes devices is transmitted and received at a higher speed (figure 1, OC-48) than the data that is transmitted and received by the other transmission lines (figure 1, access ring 101) of first network and transmission lines of second network.

Allowable Subject Matter

5. Claims 4 and 5 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and no new limitation or change of scope takes place.

Response to Arguments

6. Applicant's arguments, see pages 7-9 of the Remarks section, filed 6/23/2006, with respect to the rejections of claims 1-3, 6-10 have been fully considered.

Applicant's argues (see page 7 last paragraph and page 8 first paragraph and fourth paragraph) Lauder or De Vito reference does not teach a control unit transmit switching information in case where trouble has occurred in said transmission lines shared by said plurality of networks transmit switching information in the case of trouble only to said network having said higher transmission speed in digital wrapper system. However, Applicant's addition of this new limitation necessitated a new ground of rejections presented in this office action. As such response to Applicant's argument for this newly added limitation is moot.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2616

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salman Ahmed whose telephone number is (571)272-8307. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SA
06/30/2006

Art Unit 2616


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